

Kindergarten

*** Items in parenthesis are examples of possible curriculum ideas. It is recommended that local flora, fauna, and seasonal changes be integrated as much as possible.**

Life Science

LS1– All living organisms have identifiable structures and characteristics that allow for survival (organisms, populations, & species).

1. Differentiate between living and nonliving things; and categorize objects in each group using the significant observable characteristics they share, such as color, shape and size.
2. Recognize plants and animals as living things and describe how they are alike and different. *(Suggestions: focus on seasonal organisms such as pumpkins, plant, apples, trees, life cycles, reindeer, bears, penguins, beavers, farm animals, pond life. All above integrated into literacy and math.)*
3. Recognize that plants and animals have features that help them survive in different environments. *(Suggestions: pumpkins, plants, trees, life, reindeer, bears, penguins, beavers, farm animals, pond life. All above integrated into literacy and math.)*
4. Recognize that parents and offspring of many species closely resemble one another; and describe the similarities in appearance of given plant and animal families. *(Integrate using read-alouds, songs, emergent readers.)*
5. Recognize that living things have a life cycle, during which they are born, grow, and die.

LS2– Energy flows and matter recycles through an ecosystem.

1. Recognize that animals, including humans, interact with their surroundings using their senses; and that different senses provide different kinds of information. *(senses unit, animals in winter, animal tracks, activities from Brain Gym)*
2. Recognize that some plants and animals go through changes in appearance when the seasons change.
3. Identify the resources plants and animals need for growth and energy, and describe how their habitat provides these basic needs. *(Adopt -a - Tree, farm, ponds)*

LS3– Groups of organisms show evidence of change over time (e.g. evolution, natural selection, structures, behaviors, and biochemistry).

1. Recognize that some living things, which lived on Earth long ago, are now extinct, such as dinosaurs, mammoths, giant tree ferns, and horsetail trees. *(fossils, dinosaurs)*
2. Recognize and describe the similarities and differences in both behavior and appearance of organisms within their kingdom (plant and animal only). *(Suggestions: pumpkins, plants, trees, reindeer, bears, penguins, beavers, farm animals, pond life. All above integrated into literacy and math.)*

LS4– Humans are similar to other species in many ways, and yet are unique among Earth’s life forms.

1. Recognize that humans learn from each other in many different ways, such as listening and speaking, watching and imitating. (*all about kindergarten*)
2. Identify the sense organs, including eyes, ears, nose mouth, and skin; and describe how each can warn an individual about danger. (*all about me, five senses, family*)
3. Recognize and describe the human life cycle from birth to old age. (*through study of the family*)
4. Recognize that humans need food, water, air, waste removal and a particular range of temperatures in their environment, just as other animals do.

LS5– The growth of scientific knowledge in Life Science has been advanced through the development of technology and is used (alone or in combination with other sciences) to identify, understand and solve local and global issues.

1. Recognize that some tools, such as magnifiers, balances and thermometers, have special uses and can help gather information and extend the senses. (*Every Day Math*)
2. Recognize that some jobs/careers require knowledge and use of life science content and/or skills.

Earth Science

ESS1– The Earth and Earth materials, as we know them today, have developed over long periods of time, through constant change processes.

1. Recognize that weather conditions change frequently, and that weather patterns change over the seasons. (*calendar activities*)
2. Describe and compare weather using observations and measurements of local weather conditions. (*use of simple charts and graphs; overlaps with math and science*)
3. Recognize that water can be a liquid or a solid; and explain that it can be made to change from one state to the other, but the amount (mass) of water always remains the same in either state. (*weather, seasonal activities*)

ESS4–The growth of scientific knowledge in Earth Space Science has been advanced through the development of technology and is used (alone or in combination with other sciences) to identify, understand and solve local and global issues.

1. Recognize, and with assistance, safely demonstrate the use of tools to gather data and extend the senses, such as thermometers, hand lenses and balances. (*introductory level; overlapping math and science. Focus on calendar, weather*)

Physical Science

PS1– All living and nonliving things are composed of matter having characteristic properties that distinguish one substance from another (independent of size/amount of substance).

1. Recognize that objects can be composed of different types of materials, such as wood, metal, and paper. (*exploration/introductory*)
2. Identify the observable properties of different objects, such as color, size, shape, weight and texture. (*integrate into all areas of the curriculum*)

PS2– Energy is necessary for change to occur in matter. Energy can be stored, transferred and transformed, but cannot be destroyed.

1. Explain that the Sun provides the Earth with heat and light.

PS3– The motion of an object is affected by force.

1. Describe the properties of magnetism and demonstrate how magnets can be used to move some things without touching them. (*exploratory level*)
2. Describe the many different ways things can move, such as in a straight line, zigzag or circular motion, back and forth, and fast and slow.
3. Describe and demonstrate how the position and motion of an object can be changed by applying force, such as pushing and pulling; and explain that the greater the force, the greater the change. (*Exploration, using blocks, ramps, and bridge building*)

PS4– The growth of scientific knowledge in Physical Science has been advanced through the development of technology and is used (alone or in combination with other sciences) to identify, understand and solve local and global issues.

1. Demonstrate how to use tools, such as rulers, scales, balances, magnifiers and thermometers to measure properties of objects, such as size, weight, temperature. (*EveryDay Math*)